

Jim Poss

On his way through Logan Airport, Jim Poss stopped at a newsstand to flip through the June 2004 *National Geographic* cover story that declared “The End of Cheap Oil.” Inside was a two-page spread of an American family sitting among a vast array of household possessions that were derived, at least in part, from petroleum-based products: laptops, cell phones, clothing, footwear, sports equipment, cookware, and containers of all shapes and sizes. Without oil, the world will be a very different place. Jim shook his head.

... and here we are burning this finite, imported, irreplaceable resource to power three-ton suburban gas-guzzlers with “these colors don’t run” bumper stickers!

Jim’s enterprise, Seahorse Power Company (SPC), was an engineering startup that encouraged the adoption of environmentally friendly methods of power generation by designing products that were cheaper and more efficient than 20th-century technologies. Jim was sure that his first product, a patent-pending solar-powered trash compactor, could make a real difference.

In the United States alone, 180,000 garbage trucks consume over a billion gallons of diesel fuel a year.

By compacting trash on-site and off-grid, the mailbox-sized “BigBelly” could cut pick-ups by 400%. The prototype—designed on the fly at a cost of \$10,000—had been sold to Vail Ski Resorts in Colorado for \$5,500. The green technology had been working as promised since February, saving the resort lots of time and money on round-trips to a remote lodge accessible only by snow machine.

Jim viewed the \$4,500 loss on the sale as an extremely worthwhile marketing and proof-of-concept expense. Now that they were taking the business to the next level with a run of 20 machines, Jim and his SPC team had to find a way to reduce component costs and increase production efficiencies.

Jim returned the magazine to the rack and made his way to the New York Shuttle gate. An investor group in New York City had called another meeting, and Jim felt that it was time for him to start asking the hard questions about the deal they were proposing. These investors in socially responsible businesses had to be given a choice: Either write him the check they had been promising—and let him run SPC the way he saw fit—or decline to invest altogether so he could concentrate on locating other sources of funding to close this \$250,000 seed round. So far, all Jim had received from this group were voices of concern and requests for better terms—it was time to do the deal or move on.

Green Roots

As a kid, Jim Poss was always playing with motors, batteries, and electronics. He especially enjoyed fashioning new gadgets from components he had amassed by dismantling all manner

Carl Hedberg prepared this case under the supervision of Professor William Bygrave, Babson College, as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Funding provided by the F.W. Olin Graduate School of Business and a gift from the class of 2003. Copyright © by Babson College 2004.

of appliances and electronic devices. He also spent a lot of time out of doors cross-country skiing with his father. Jim said that by his senior year in high school, he knew where he was headed:

I had read Silent Spring¹ and that got me thinking about the damage we are doing to the earth. And once I started learning about the severity of our problems—that was it. By the end of my first semester at Duke University, I had taken enough environmental science to see that helping businesses to go green was going to be a huge growth industry.

Jim felt that the best way to get businesses to invest in superior energy systems was to make it profitable for them to do so. In order to prepare himself for this path, Jim set up a double major in Environmental Science and Policy and Geology—with a minor degree in engineering. He graduated in 1996 and found work as a hydrologist, analyzing soil and rock samples for a company that engineered stable parking lots for shopping malls. He didn't stay long:

That certainly wasn't my higher calling. I poked around, and within six months I found a fun job redesigning the production capabilities at a small electronics firm. Soon after that, I started working for this company called Solectria; that was right up my alley.

As a sales engineer at Solectria—a Massachusetts-based designer and manufacturer of sustainable transportation and energy solutions—Jim helped clients configure electric drive systems for a wide range of vehicles. He loved the work and developed an expertise in using spreadsheets to calculate the most efficient layout of motors, controllers, power converters, and other hardware. By 1999, though, he decided that it was once again time to move on:

Solectria had a great group of people, but my boss was a micro-manager and I wasn't going to be able to grow. I found an interesting job in San Francisco as a production manager for a boat manufacturing company—coordinating the flow of parts from seven or eight subcontractors. When the [Internet] bubble burst, the boat company wasn't able to raise capital to expand. My work soon became relatively mundane, so I left.

This time, though, Jim decided to head back to school:

I had now worked for a bunch of different businesses and I had seen some things done well but a lot of things done wrong. I knew that I could run a good company—something in renewable energy, and maybe something with gadgets. I still had a lot to learn, so I applied to the MBA program at Babson College. I figured that I could use the second-year EIT² module to incubate something.

¹ *Silent Spring*, written in 1962 by Rachel Carson, exposed the hazards of the pesticide DDT, eloquently questioned humanity's faith in technological progress, and helped set the stage for the environmental movement. Appearing on a CBS documentary shortly before her death from breast cancer in 1964, the author remarked, "Man's attitude toward nature is today critically important simply because we have now acquired a fateful power to alter and destroy nature. But man is a part of nature, and his war against nature is inevitably a war against himself. . . . [We are] challenged as mankind has never been challenged before to prove our maturity and our mastery, not of nature, but of ourselves."

² The Entrepreneurship Intensity Track (EIT) was a compressed and highly focused entrepreneurship curriculum for graduate students at Babson College. The program provided a select group of MBAs who intended to become full-time entrepreneurs as soon as they graduated with the necessary skills to take their new venture ideas through the critical stages of exploration, investigation, and refinement, so they could launch their businesses during the spring of their second year.

Opportunity Exploration

Between his first and second years at Babson, Jim applied for a summer internship through the Kauffman Program. He sent a proposal to the Spire Corporation—a publicly traded manufacturer of highly engineered solar electric equipment—about investigating the market and feasibility of solar-powered trash compactors. Jim had copied his idea to someone he knew on the board, and the same week that the HR department informed him that there were no openings, he got a call from the president of the company:

Roger Little had talked with the board member I knew and said that while they weren't interested in having me write a case study on some solar whatever-it-was, he said they'd like me to write some business plans for Spire—based on their existing opportunities and existing operations. I said sure, I'll take it.

That summer, Jim worked with the executive team to complete three business plans. When they asked him to stay on, Jim agreed to work 15 hours per week—on top of his full-time MBA classes. He mentioned that every month or so he would bring up his idea for a solar-powered trash compactor with the Spire executives, but their answer was always the same:

I was trying to get them to invest in my idea or partner with me in some way, and these guys kept saying, "It'll never work." So I just kept working on them. I did the calculations to show them that with solar we could do ten compactions a day and have plenty [of electric charge] on reserve for a run of cloudy weather. Finally, they just said that they don't get into end-user applications.

Early in his second year, Jim attended a product design fair featuring young engineers from Babson's new sister school, the Franklin W. Olin School of Engineering. He connected with Jeff Satwicz, an engineering student with extensive experience in remote vehicle testing for the Department of Defense. When Jim got involved with a project that required engineering capabilities, he knew who to call:

I went up the hill to Olin to ask Jeff if he'd like to help design a folding grill for tailgating—he said sure. It's funny, the two schools are always talking about working together like that, but it doesn't happen until the students sit in the Café together and exchange ideas. That's how it works; the faculty wasn't involved—and they didn't really need to be.

Although Jim didn't stay with the grill team, the project had forged a link with an engineer with a penchant for entrepreneurship. Now certain of his trajectory, Jim incorporated the Seahorse Power Company (SPC)—a nod to his ultimate aspiration of developing power systems that could harness the enormous energy of ocean waves and currents.

Understanding that sea-powered generators were a long way off, Jim began to investigate ways to serve well-capitalized ventures that were developing alternative-energy solutions. One idea was to lease abandoned oil wells in California for the purpose of collecting and selling deep-well data to geothermal energy businesses that were prospecting in the area. When Jim sought feedback, he found that even people who liked his concept invariably pointed him in a different direction:

Everybody kept telling me that wind was where it's at—and they were right; it's the fastest growing energy source in the world. All the venture capitalists are looking at wind power. I realized, though, that if I was going to make wind plants, I'd have to raise two to five hundred